

U.S. National Phase of International Application No. PCT/SE2003/001859 (Attorney Docket No.36211)

Inventor: Hillforth, Mikael

Title: AN APPARATUS FOR DETECTING ANIMALS

Preliminary Amendment

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) An apparatus for detecting an animal (1) having a body part (2) and a head part (3) , comprising:  
  
an animal passage (4) extending in a transport direction (t), said passage being defined by a first enclosure member (5) and a second enclosure member (6), which members are arranged on a respective side of the passage (4) and extend substantially in parallel to said transport direction (t), and  
  
a sensor device (7,8); which is arranged to sense the animal (1) in the passage (4),  
  
~~characterised in that~~ wherein the sensor device (7,8) is arranged to sense a parameter related to a cross-section size of the animal (1) at a determined position (p) in the passage (4), and to produce a signal when the parameter fills a certain condition.
2. (Currently amended) An apparatus according to claim 1, ~~characterised in that~~ wherein the sensor device (7,8) is arranged to produce said signal when the value of said parameter indicates that the cross-section size of the animal (1) is less than a predetermined value at the determined position (p).

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3. (Currently amended) An apparatus according to ~~any one of claims 1 and 2, characterised in that~~ claim 1, wherein the parameter is related to the width of the animal (1) seen in a determined direction, and wherein the sensor device (7,8) is arranged to produce said signal when said parameter indicates that the width of the animal (1) is less than a predetermined value at the determined position (p).
4. (Currently amended) An apparatus according to claim 3, ~~characterised in that~~ wherein the determined direction is a substantially vertical direction.
5. (Currently amended) An apparatus according to ~~any one of claims 3 and 4, characterised in that~~ claim 4, wherein the determined direction is a substantially vertically downward direction.
6. (Currently amended) An apparatus according to claim 3, ~~characterised in that~~ wherein the determined direction is a substantially horizontal direction.
7. (Currently amended) An apparatus according to ~~any one of the preceding claims, characterised in that~~ claim 1, wherein the sensor device (7,8) comprises at least a first sensor (7) and a second sensor (8), wherein the first sensor (7) is arranged to sense the presence of the animal (1) at a first point of the passage, (4) and wherein the second sensor (8) is arranged to sense the presence of the animal (1) at a second point of the passage (4).

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8. (Currently amended) An apparatus according to claim 7, ~~characterised in that~~ wherein the first point and the second point are both located at the determined position (~~p~~) with regard to the transport direction (~~t~~) but spaced apart from each other with a distance (~~d~~), wherein said distance (~~d~~) is larger than the width of the head part (~~3~~) but smaller than the width of the body part (~~2~~) of an animal (~~1~~) of a normal size to be guided through the animal passage (~~4~~).
9. (Currently amended) An apparatus according to ~~any one of claims 7 and 8, characterised in that~~ claim 7, wherein the first point is located in the proximity of the first enclosure member, (~~5~~) whereas the second point is located in the proximity of the second enclosure member (~~6~~).
10. (Currently amended) An apparatus according to ~~any one of claims 7 to 9, characterised in that~~ claim 7, wherein the first sensor (~~7~~) and the second sensor (~~8~~) both are provided above the passage (~~4~~) to sense the animal (~~1~~) passing below the respective first and second sensors (~~7, 8~~).
11. (Currently amended) An apparatus according to ~~any one of the preceding claims, characterised in that~~ claim 1, wherein the apparatus comprises a control member (~~10~~) connected to the sensor device (~~7, 8~~).
12. (Currently amended) An apparatus according to claim 11, ~~characterised in that~~ wherein the control member (~~10~~) is arranged to count the animals (~~1~~) passing the animal passage (~~4~~) in response to the sensing of the sensor device (~~7, 8~~).

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13. (Currently amended) An apparatus according to ~~any one of the preceding claims,~~  
~~characterised in that~~ claim 1, wherein the apparatus comprises a gate device ~~(14, 15, 18)~~  
arranged in the passage ~~(4)~~ to take one of an open position and a closed position.
14. (Currently amended) An apparatus according to ~~claims 11 and 13,~~ characterised in that claim  
11, further including a gate device arranged in the passage to take one of an open position  
and a closed position, and wherein the control member ~~(10)~~ is arranged to control the  
position of the gate device ~~(14, 15, 18)~~ in response to the sensing of the sensor device ~~(7, 8)~~.
15. (Currently amended) An apparatus according to ~~any one of claims 13 and 14,~~ characterised  
in that claim 13, wherein the gate device includes a gate ~~(14, 15)~~; which is provided in the  
proximity of the sensor device ~~(7, 8)~~ and arranged to close the passage ~~(4)~~.
16. (Currently amended) An apparatus according to ~~any one of the claims 13 to 15,~~ characterised  
in that claim 13, wherein the gate device includes a gate ~~(18)~~; which is provided in the  
proximity of the sensor device ~~(7, 8)~~ and arranged to close the passage ~~(4)~~ and open an exit  
passage ~~(20)~~ leading away from the passage ~~(4)~~.
17. (New) An apparatus according to claim 3, wherein the sensor device comprises at least a  
first sensor and a second sensor, wherein the first sensor is arranged to sense the presence of  
the animal at a first point of the passage, and wherein the second sensor is arranged to sense  
the presence of the animal at a second point of the passage.

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18. (New) An apparatus according to claim 17, wherein the apparatus comprises a control member connected to the sensor device, and wherein the control member is arranged to count the animals passing in the animal passage in response to the sensing of the sensor device.
19. (New) An apparatus according to claim 18, wherein the apparatus further comprises a gate device arranged in the passage to take one of an open position and a closed position, and wherein the control member is arranged to control the position of the gate device in response to the sensing of the sensor device.
20. (New) An apparatus according to claim 19, wherein the gate device includes a gate which is provided in the proximity of one of the first sensor and second sensor of the sensor device, and is arranged to close the passage and open an exit passage leading away from the passage.